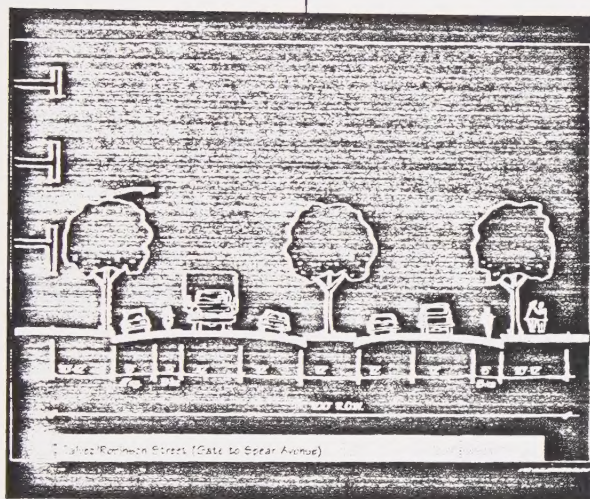


# HUNTERS POINT SHIPYARD

LAND USE PLAN

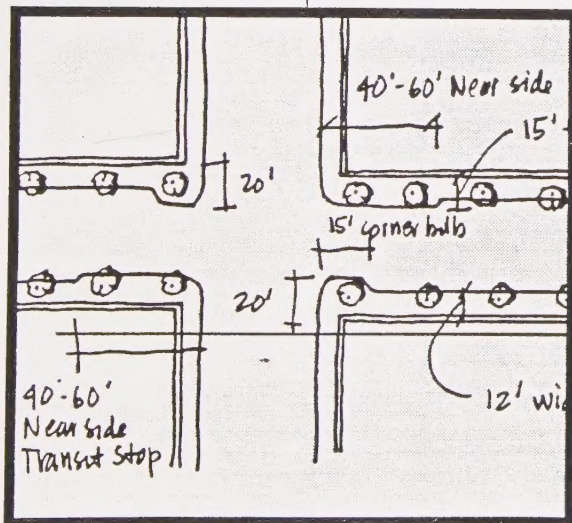
## transportation design framework



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San Francisco  
Planning Department

March 1996



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**Publication:**  
**March 1996**

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## I. INTRODUCTION

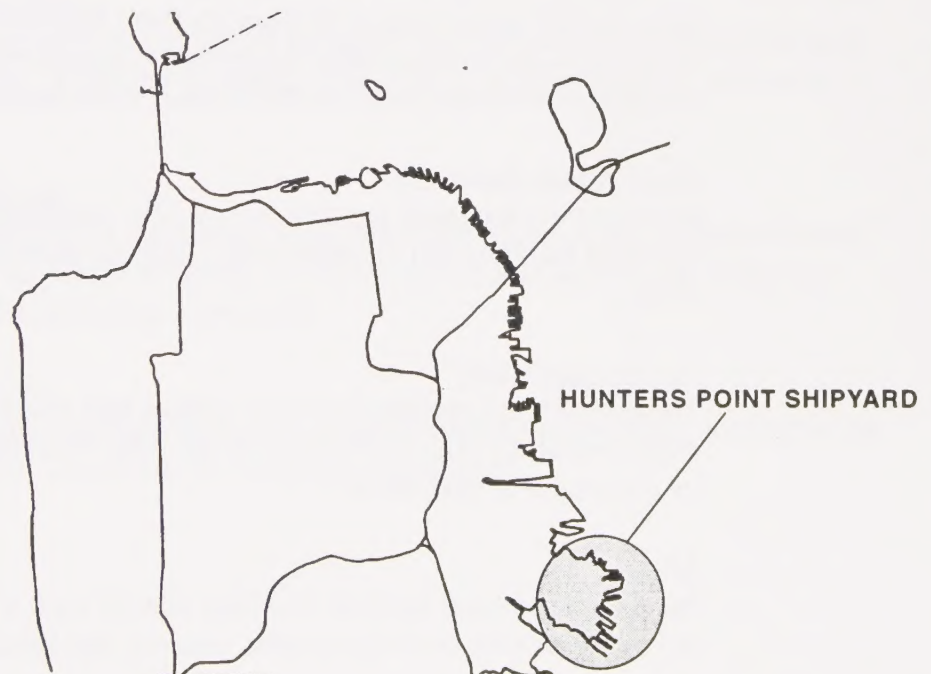
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### Purpose

The purpose of this document is to draft the design, standards, guidelines and supporting programs for the transportation system and facilities in the Hunter's Point Shipyard. This report relates to the *Area Plan* (March 1996) and the *Design for Development Framework* (November 1995). This document provides more detailed provisions for the transportation facilities and system of the Shipyard, including streetscape and intersection design, parking and transit service standards, and the relationship between transportation and land use. To view the subject of transportation comprehensively, the recommendations and provisions address the Shipyard as a whole, the Shipyard in the context of the City of San Francisco and the Bay Area, and each of the four Shipyard subareas identified in the *Design for Development Framework*: the Hill Housing Area, the Lockwood Landing Area, the Industrial and Research & Development Area, and the Waterfront Open Space. Some definitions of transportation terms used in this report can be found on the following page.

This draft document will be subject to review by the Hunters Point Shipyard Citizens Advisory Committee (CAC) and the Redevelopment Agency. Subsequent drafts of this document will be presented to the CAC as part of the final "Design for Development Framework" document. A final draft of this document is scheduled to be prepared in June 1996 by the Redevelopment Agency as part of the Hunters Point Shipyard "Redevelopment Plan."

FIGURE 1



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**Document  
Organization**

This document establishes the general basis -- and outlines specific guidelines and standards for -- the design and development of a comprehensive and functioning transportation system at the Hunters Point Shipyard.

The section entitled **Transportation Design Objectives** outlines the concepts and objectives for transportation at the Shipyard, their interrelationships with land use, and the general design guidelines for the key transportation modes and facilities as they apply throughout the Shipyard. Design standards and guidelines of the streetscape and transportation facilities for specific sub-areas within the Shipyard are included in the **Streetscape and Facilities Design Standards and Guidelines**. **Transportation Demand Management** identifies a variety of programs and strategies that developers, property owners, employers and institutions can enlist to help keep transportation operations viable and efficient in the Shipyard.

Following is a **Definitions** section that identifies and defines transportation terms that are used throughout this document.

**Definitions**

The following terms are defined in their most general sense, rather than in their specific application to the Hunters Point Shipyard. The terms are also used in the maps and related policy documents to ensure consistency in the review of all transportation issues related to the Hunters Point Shipyard.

*Development Standards*

Development standards regulate the specific, measurable qualities of transportation facilities and infrastructure. They are shown in ***boldface and italics***.

*Design Guidelines*

These are Design recommendations of how best to achieve the transportation objectives of the Hunters Point Shipyard Area Plan that are not strictly regulated by Development Standards.

*Alley*

An alley is a narrow right-of-way (less than 32 feet) with the principle function of providing parking or service access, loading, and local circulation.



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### Arterial Street

An arterial street is a thoroughfare that connects one district to another and experiences high traffic volumes. They are generally wide streets designed to move surface through traffic more quickly than other surface streets. Arterial streets may also serve as transit streets.

### Local/Collector Street

Local/collector streets collect and disperse traffic from a variety of streets, including arterial streets. They are generally smaller-scaled and slower-speed than arterials, and are designed to accommodate a variety of modes, including bicycle traffic, mass transit, and pedestrians, as well as trucks and automobiles.

### Multi-Modal

Multi-modal is a description that indicates a broad and varied accommodation and/or provision of transportation modes. These modes most typically include automobile (single-occupant as well as ridesharing), transit, pedestrian and bicycle travel. Multi-modal may also describe a variety of transportation technologies, such as rail, ship, or road-based travel.

### Off-Street Parking

Off-Street Parking is the space off the public right-of-way provided for the parking of vehicles. It may be provided in an open lot or in a structure, such as a garage.

### Residential Street

Residential streets are streets providing vehicular access to and from residential areas. They are scaled to slower, quieter vehicle travel and include wider sidewalks for safer pedestrian movement.

### Surface Parking

Surface Parking typically applies to off-street parking space that is located on an open (unroofed, unwallled) lot, usually at street-level.

---

### Transportation Demand Management Programs

Transportation Demand Management (TDM) programs are actions seeking to modify transportation behavior through incentives. The goals of the programs are to minimize congestion, to encourage use of alternative travel modes and work schedules, and to improve efficiency of transportation facilities and operations in a broad area. TDM measures generally require cooperation of both the public and private sectors to be successfully implemented, and often involve the participation of regional and local government, property owners, developers, and employers. Preferred parking for van pools, transit fare subsidies, flex-time hours and educational/informational promotions of alternative travel modes are examples of TDM programs.

### Transit Street

Transit streets are streets with a principal function of moving transit vehicles and pedestrians, usually by the provision of wide lanes, wide sidewalks, and other street amenities such as bus bulbs, shelters for riders waiting for bus service, and street furniture.

### Water-Borne Transit

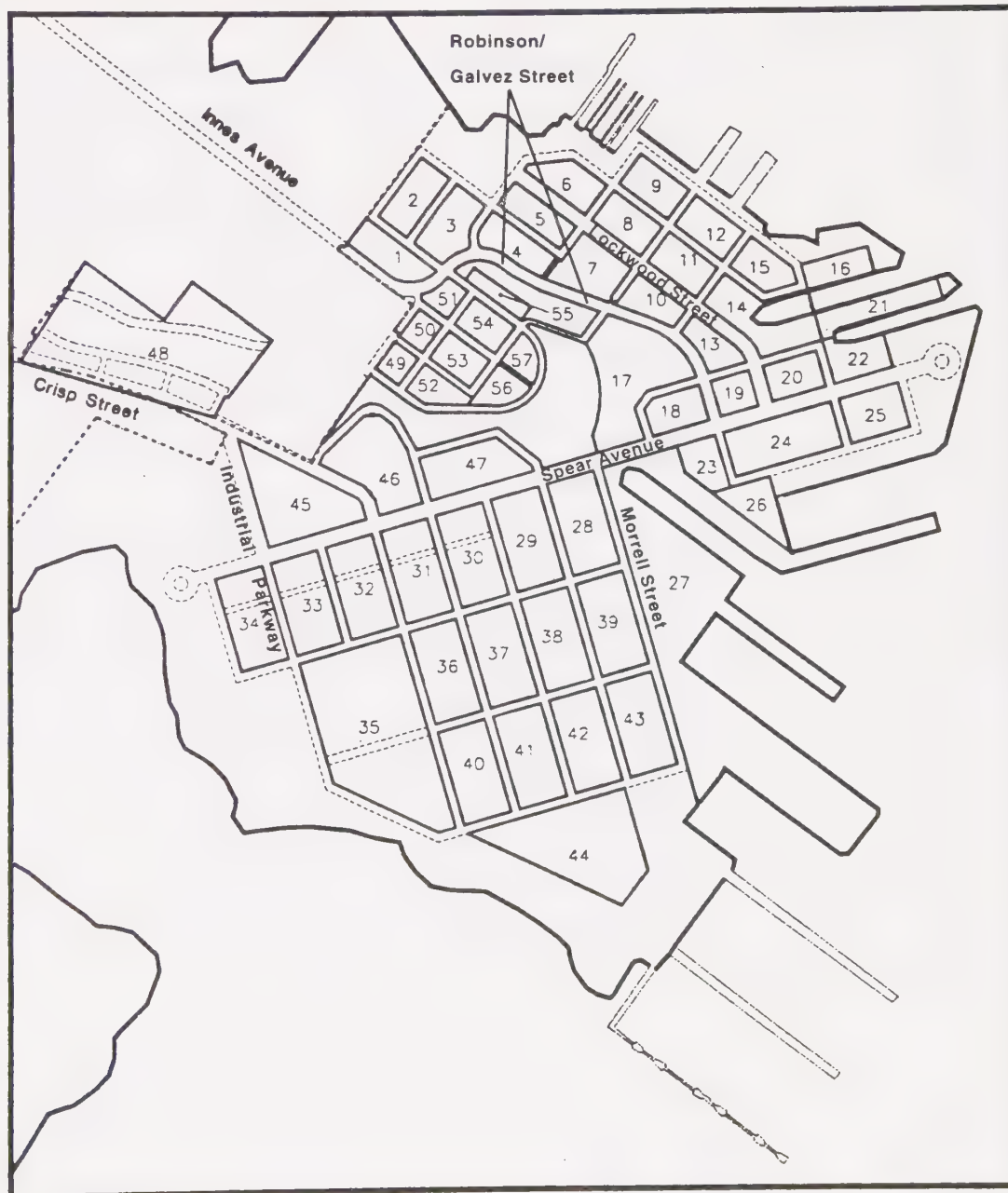
Water-borne transit is a form of public transportation, such as water-taxis and ferryboats, that travel on (or, in the case of hovercrafts, slightly above) the surface of water.

### Water Taxi

Water taxis are boats or other small water-borne crafts that shuttle passengers from a variety of points along the waterfronts of a city or a region. They may operate exclusively during special events, seasonally or year-round, and they may be regularly scheduled services, or demand-based (similar to conventional taxi service).

## BLOCK IDENTIFICATION MAP

FIGURE 2



### Block Number

For ease in defining various types of design and development standards or guidelines, the various blocks that would be created under the Shipyard reuse plan are numbered. Figure 2 defines the street and block grid proposed for the Hunters Point Shipyard. Some proposed transportation standards apply to specific blocks, and references are made later in this document to the block numbers.



## II. TRANSPORTATION DESIGN OBJECTIVES

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### Overall Concepts for Transportation Facilities and Services

The key objectives of the design of transportation facilities in the Hunters Point Shipyard are:

- Accessibility for commerce, employment and residents
- Mobility
- Multiple Modes of Transportation
- Safety
- Convenience
- Connectivity to the Existing City Street Grid and Transportation Systems
- Quality of Design and Environment
- Flexibility

Situated on a promontory at the southeastern edge of the city, the Hunters Point Shipyard is relatively isolated. The bay and the steep hills that make the site so spectacular also limit the number of major streets that link the Shipyard to the rest of the city to two: Crisp Avenue and Innes Street. **Access** and **Mobility** (for people *and* goods) is necessary for the economic viability of the Shipyard community. The private automobile will be considered only part of a **Multi-Modal** system, however, to protect and enhance the **Quality of the Environment**, to ensure that other mode choices are **Convenient**, and to allow for more **Flexibility** in the growth of the area. Transit services will **Connect** the Shipyard to a wide area of San Francisco and to major regional transportation corridors, making alternative transportation choices more feasible. **Safety** must be ensured for all modes of transportation, including pedestrian and bicycle. The **Design Quality** should enhance the scenic quality of the site and support a vibrant and pleasant environment in which to work, live and recreate.

The emphasis on a multi-modal transportation system for the Hunters Point Shipyard reflects the goal of consistency with San Francisco's commitment to citywide multi-modal transportation. This system is properly *balanced* when the accommodation of one transportation mode does not preclude -- physically, practically or even perceptually -- the successful and viable operation of other modes. The characteristics of sidewalk space, lane widths, parking supply, walking distances from transit stops to destinations and bus schedules all figure in to the equation that determines whether a trip will be made by transit, auto, bicycle, or on foot.

Ultimately, the goal is providing the most *choices* for moving about the Shipyard. Figure 3 shows the hierarchy of streets within the Shipyard, relating to

FIGURE 3



TRANSPORTATION - STREET HIERARCHY

- |   |                |   |                        |
|---|----------------|---|------------------------|
|  | Major Arterial |  | Local                  |
|  | Transit        |  | Residential            |
|  | Collector      |  | Alley (between arrows) |

FIGURE 4



TRANSPORTATION SYSTEM

Truck/Service  
Transit

Bicycle (commuter bike)  
Recreational Trail



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the relative size and function of the various streets necessary to accommodate expected types and volumes of traffic. Figure 4 shows how different streets are designated for priority accommodation of certain modes, to achieve balance in the transportation system and balance between transportation and land uses.

These objectives are also realized through Transportation Demand Management programs that encourage cooperation between Shipyard employers, property owners, tenants and employees to promote and use alternative transportation modes and work schedules, to make transportation more convenient and to allow flexibility in the use of facilities. Sufficient investments in maintaining and upgrading the transportation system must be made to ensure its functional vitality and responsiveness to a local economy as the Shipyard grows and develops.

### **Relationships Between Transportation, Land Use and Urban Design**

The transportation system of the Shipyard helps establish the fundamental land use patterns and, in doing so, becomes an integral element of the overall urban design for the Shipyard. Different areas of the Shipyard rely on different transportation modes and facilities to provide adequate service for the proposed land uses, ranging from transit-oriented high-density areas to low-density sites dependent on convenient truck and automobile access. In all cases, safe and convenient movement calls for careful siting and orientation of buildings, sidewalks, and supporting transportation facilities. The design of the Shipyard streetscape, buildings and sidewalks, as guided by this document and the "Design for Development Framework" document, does more than provide the backdrop for a lively economy and environment: it ensures that all aspects of the transportation system, especially for pedestrian, transit users and bicyclists, remain feasible and desirable.

Three pivotal transportation/land use design concepts contribute substantially to this vitality: *Proportion*, *Articulation* and *Street Wall*.

#### **Proportion**

Proportion concerns the relationship between the height of proposed buildings and the width of the public right-of-way (including streets, sidewalks, medians) they abut. Variations in proportion range from "wide-open" to "enclosed," but a sense of definition -- a positive and vivid sense of place -- can be achieved by maintaining a ratio between 1:1 to 1:2.5 of building height (vertical) to street width (horizontal). Good streetscape design reflects a balance between

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this optimal proportion, a street width and design that fully accommodates all competing needs, and adjacent building heights. When the horizontal distance is greater than twice height of the adjacent buildings, street trees and landscaped medians can help reduce the perception of excessive width and restore some definition and scale to the streetscape. In order for trees to appreciably contribute to this sense of definition, they must be sufficiently spaced and appropriately scaled to establish a strong presence.

### Articulation

The scale of building facades, openings and street elements such as trees and sidewalk bulbs are also important to the desirability of the pedestrian environment. The finely-scaled, 25-foot wide San Francisco lot pattern provides for both a human-scaled, pedestrian-friendly street, and flexibility and opportunity for tenants who desire street exposure and a wide range of space needs. This pattern can be replicated either by articulating larger buildings or by true subdivision, and would strengthen the image of commercial and residential areas in the Shipyard as “San Francisco” neighborhoods.

### Street Wall

The sense of definition also depends on the integrity of the *street wall*, the vertical edge of the public right-of-way made up of the walls of the buildings that front it. A strong street wall has a consistent height and regular setback from the right-of-way, with only slight moderation to relieve monotony. Wherever a street grid has an unusual geometric element, such as a diagonal or curved line, a strong street wall can pronounce this change in the pattern and enhance orientation and a unique sense of place. Vacant lots, neighboring buildings that are out of scale with each other, and front walls that ignore the street weaken the street wall and its appeal -- or even the sense of security -- for the pedestrian.

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DESIGN  
OBJECTIVES

## Design Objectives for Accommodation of Multiple Transportation Modes

### Vehicular Circulation Design: Automobiles, Trucks and Service Vehicles

The economic strength and vitality of the Shipyard depend on convenient vehicular access, by trucks and other service vehicles as well as by private autos and public transit. This access must be enhanced with the development of a local street system that:

- offers good connections to the regional highway system
- accommodates all modes in a balanced, multi-modal system
- minimizes conflicts in the movement of trucks, transit vehicles, cars and bicycles (often all on the same street segments)
- anticipates the appropriate volumes and types of traffic
- channels the appropriate traffic to its destination (and, if desirable, away from others)
- provides access when needed for all functions and aspects of the trips

Nevertheless, the safe movement of pedestrians, the efficient use of land and the desire to create a strong and livable community require keeping the widths of street and arterial widths to a minimum and in using landscaping as an aesthetic and environmental amenity.

There are two principal entry points to the Shipyard: Innes Avenue at Galvez Avenue/Robinson Street, and Crisp Avenue near I Street. Both entryways are dramatically sited at the foot of the steep slope of Hunters Point where it rises above the Bay shoreline. The experience of traveling to the Shipyard is enhanced by the contrast between “squeezing” through these constricted gateways and then turning (as both Galvez/Robinson and Crisp do) around the bend to let the flat areas of the Shipyard and the full aspect of the Shipyard community come into view. In creating this set of gateways, designers should consider:

- the historic function of the Shipyard
- the character of the community responsible for its former prosperity
- the promise that new redevelopment offers the Shipyard’s future
- emphasize the Shipyard’s connection to the City
- reward travelers in reaching their destination
- ceremoniously announce the arrival



- 
- establish a first impression that contributes to the positive image of the Shipyard.
  - traveler position, height and sightline, speeds for different modes -- automobile, transit, bicycle, pedestrian

These considerations can be expressed through the design of the street and sidewalk rights-of-way and of other components of the streetscape, including:

- roadway landscaping
- the street signage
- lighting and other “furniture”
- the architectural design of abutting buildings.

#### Transit Design Objectives

Public transit is envisioned as a critical aspect to the accessibility of the Shipyard. Three primary bus transit corridors are planned to link the Shipyard with the rest of the City and the region: the 19 Polk from north-central area of the city via Innes, Galvez/Robinson and Spear; the 24 Divisadero, also from the north-central area via Crisp (which may be extended into the Shipyard alone or with the 23 Monterey, which serves the southwest portion of the city); and the 54 Felton, extending from the southwestern corner of the City to the Hilltop area. To accommodate this service and enhance transit as a critical part of the transportation system, Lockwood Street and Spear Avenue are designed as “transit streets,” with special sensitivity to making transit a priority.

Although all three lines connect either to a BART or Muni Metro station, none offers fast, direct transit links to downtown or many other major centers of activity in San Francisco, or to any CalTrain station near the Shipyard. Five other Muni lines serve the South Bayshore area near the Shipyard -- the 9 San Bruno and 15 Third from the northeast, the 29 Sunset and 44 O’Shaughnessy from the northwest and west, and the 56 Rutland from the southeast. These lines connect Downtown to the South Bayshore area and to the CalTrain stations at Bayshore and Paul Avenue.

Future enhancements and developments in transit service to the Shipyard should include:

- direct, fast service from the Shipyard to downtown with a minimum of transfers;

- 
- comprehensive access to all general areas of San Francisco;
  - direct connections to CalTrain;
  - regular service scheduled to make transit a viable, all-purpose transportation option;
  - locating transit stops to make walking convenient from all areas of the Shipyard;
  - locating transfer points to serve the greatest number of transit riders;
  - convenient access to all regional transit systems in the Bay Area; and
  - provisions for ferry or water taxi service adjacent to a central transit hub.

Additional accommodations for transit users include amenities to help make transit use in the Shipyard more comfortable, convenient and safe. These include:

- transit shelters benches street lighting;
- signage;
- telephones;
- clearly presented maps and information; and
- bicycle lockers and secure parking facilities at key transfer points.

The design of these amenities should consider what possible deterrents or hardships a transit rider may face and address them accordingly. Consideration may include:

- timed transfers to facilitate transit connections (especially to regional transit);
- a key transfer point within two blocks of the Shipyard's most people-intensive land use;
- walking distance for most area residents and employees;
- prevailing wind patterns and other weather conditions;
- safety concerns regarding street traffic;
- visibility and lighting especially during nighttime conditions;
- transit stop proximity to destinations;
- transit rider confusion and disorientation;
- comfortable seating and waiting area at transit stops; and
- automobile parking and drop-off not to detract from pedestrian-oriented destination.

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### *Pedestrian Considerations*

Given the multi-modal nature of the Shipyard street system, safety is a key concern for pedestrian circulation. Accordingly, consideration must be given to the following:

- the location, width and length of crosswalks for pedestrians of all speeds and abilities;
- sidewalk widths and wheelchair curb cuts and ramps to allow access for the disabled;
- street lighting geared for pedestrians on the sidewalk as well as for drivers;
- signage to alert drivers of pedestrian activity, especially in areas where heavy loading and unloading of trucks occurs;
- the location of curb cuts, driveways and parking lot/garage entrances where automobiles must regularly cross sidewalks; and
- the likely location of informal and unmarked pedestrian paths, such as to the bayshore parks, open space and to the recreational trails.

The pedestrian experience in the Shipyard should be made pleasant and comfortable. Sidewalks should invite use as public open space, and especially where pedestrian activity is high, they should be widened and improved with special design treatments, such as:

- benches;
- street trees;
- street light standards;
- sidewalk paving patterns;
- temporary fixtures such as tables, chairs or unobtrusive advertisements directing people to events or commercial establishments;
- sunlight access and an understanding of prevailing wind patterns and other aspects of the microclimate; and
- stairways on steep slopes where pedestrian traffic is likely, especially to the Hilltop Park.

### *Bicyclist Needs*

Many of the issues of safety, convenience and accommodation for bicyclists are similar to those for transit riders and pedestrians. However, bicyclists are unique in that they are required to share the right-of-way with trucks, cars and buses, and they generally travel at speeds comparable to these other modes. As a desirable



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means of transportation in the Shipyard, bicycles should be considered in every aspect of the transportation system design, including:

- wide curb lanes throughout the system of arterials, collectors and local streets;
- the location of parking entrances, driveways, curb cuts, bus stops and sidewalks bulbs (particularly on the commuter bike route planned for the Shipyard);
- extensive bicycle treatment signage along Crisp and Innes;
- bicycle parking at key destinations and transit facilities; and
- lockers and showers to make the use of bicycles convenient for employees.
- A Class II striped, 5-foot wide bicycle lane on Galvez-Robinson.

#### General Parking Concepts

Balance adequate parking spaces necessary to support economic growth with efficient use of land. Avoid detrimentally affecting the viability of other transportation modes, construction costs and desirability and quality of the urban environment.

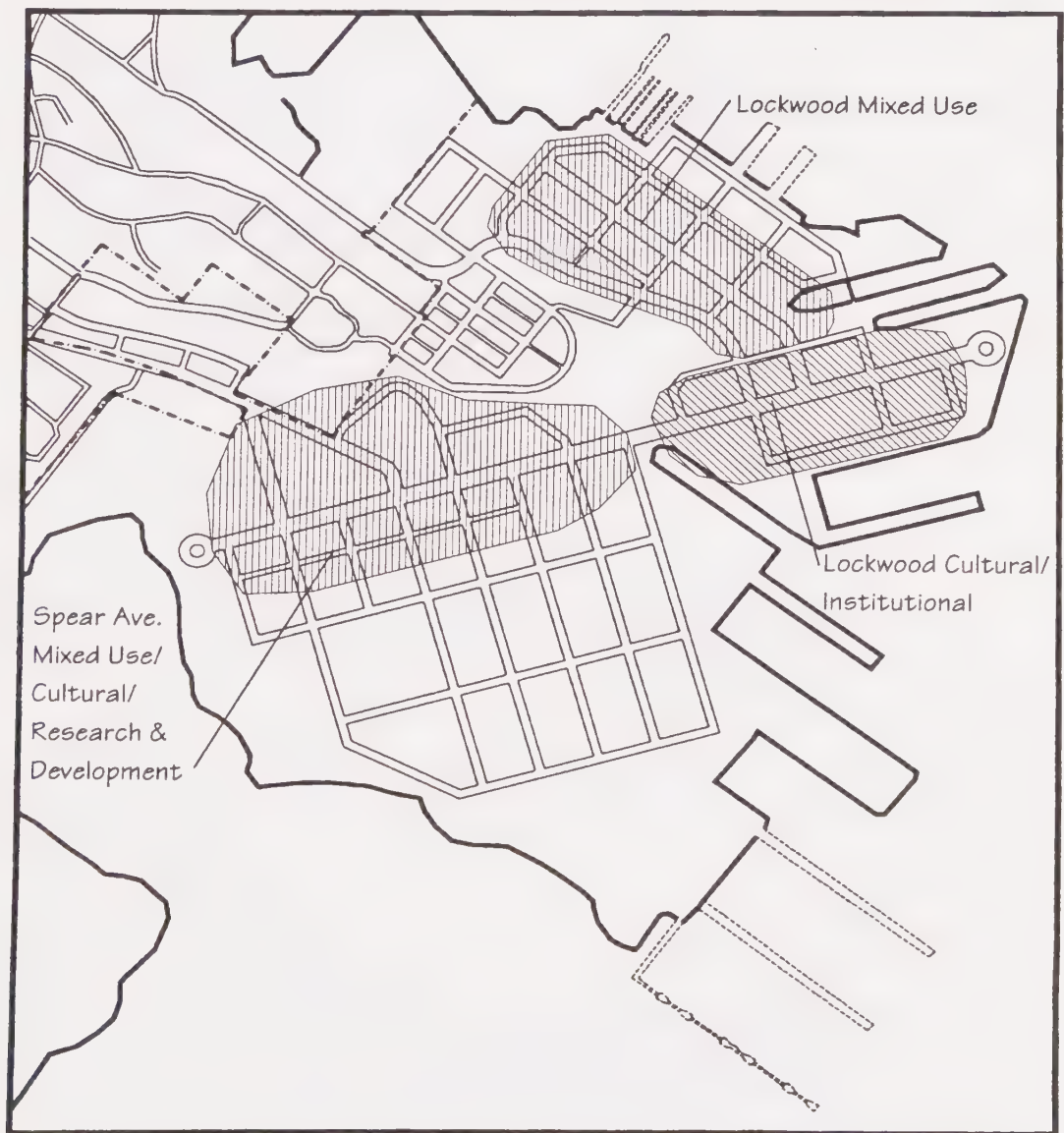
Throughout the Shipyard, **short-term parking** is accommodated on-street. Block sizes and curb cut restrictions enable sufficient curb space for short-term parking. **Long-term parking** is generally provided through requirements for off-street accessory parking. Requirements vary depending on separate areas of the Shipyard (see FIGURE 5): the Hill Housing Area (one space for each unit maximum), the Lockwood Mixed Use Area and the Lockwood Cultural/Institutional Areas abutting Spear Avenue (collective parking based on demand, located on- or off-site), and the Spear Avenue Mixed Use/Cultural/Research & Development Area (parking as required for each land use by City Planning Code).

#### General Loading Concepts

Loading must be accommodated appropriately to minimize noise, traffic disruption and safety hazards. Access to loading facilities for Shipyard buildings should be provided in a manner that is most convenient and efficient for businesses and the service industry, but does not conflict with circulation on the streets or sidewalks. Access should be located away from transit streets and heavy pedestrian traffic. Local streets and alleys offer access to the rear of buildings without increasing congestion on arterials, transit and collector streets.

FIGURE 5

MAP OF SPECIAL PARKING AND LOADING/SERVICE AREAS



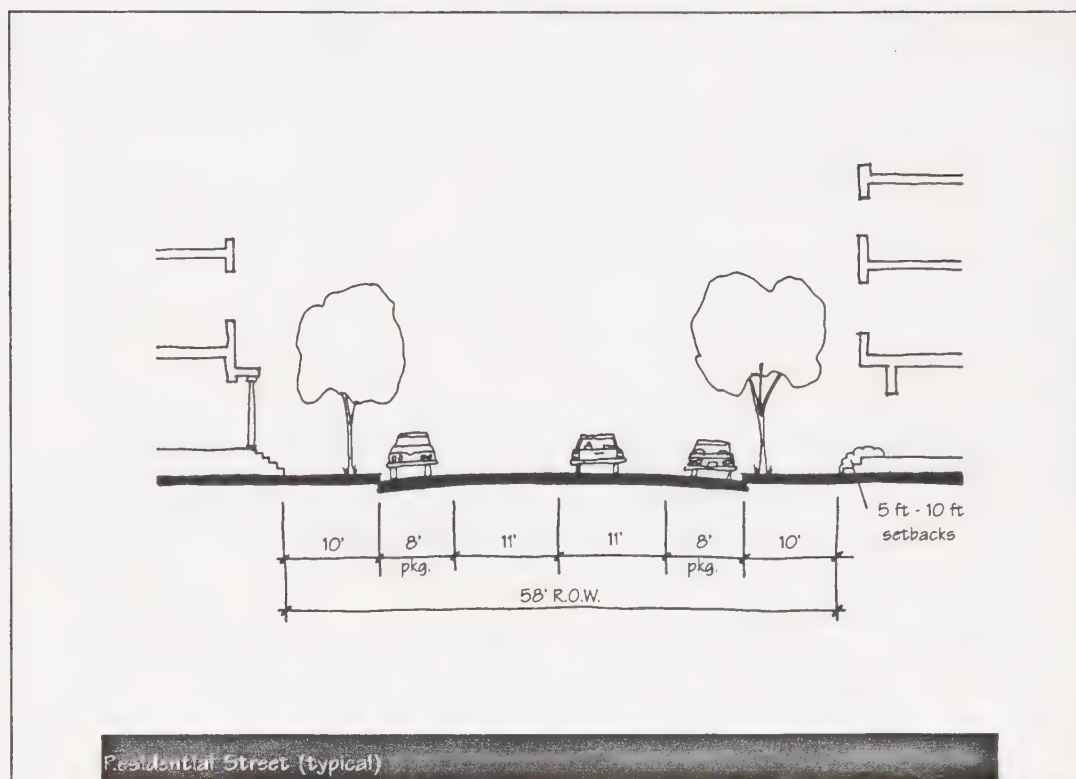
In the Lockwood Mixed Use, Lockwood Cultural/ Institutional and Spear Avenue Mixed Use/Cultural/Research & Development Areas (see FIGURE 5), loading is generally provided in a collective fashion for each block, accommodated in a common area at the rear of the commercial buildings and is supplemented by some on-street loading zones. For the Industrial areas south of Spear Avenue, off-street loading is provided individually for each use, using standard City Planning Code ratios.

#### Area One: Hill Housing

##### Residential Streets

Create a quiet, comfortable “home” feeling in the residential areas of the Hilltop. Discourage fast traffic, encourage walking as a recreational activity, make transit access to other points in the Shipyard and the city convenient.

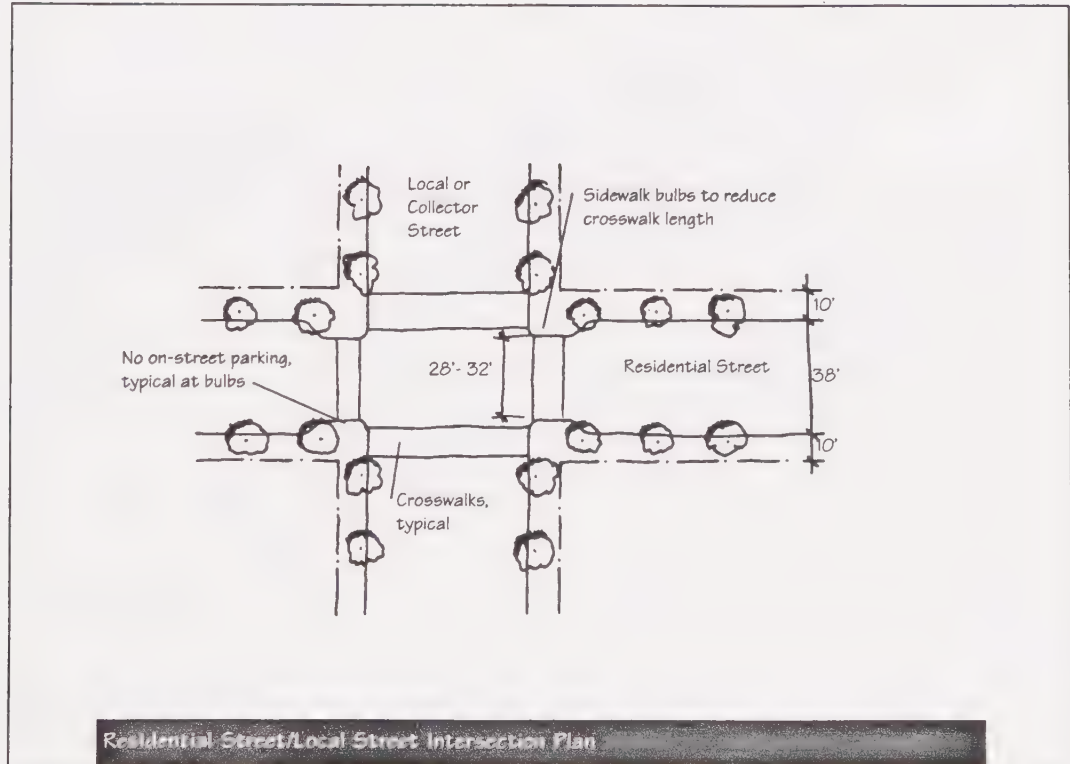
FIGURE 6



- *Total right-of-way width of 58 feet.*
- *Two travel lanes, each 11 feet in width.*
- *Two curb (parking) lanes, each eight feet in width.*
- *Two 10-foot sidewalks.*
- *Corner sidewalk bulbs twelve feet long, increasing the sidewalk width to fifteen feet at each side, and reducing the crosswalk to 28 feet wide where the residential streets intersect with other local or collector streets.*
- *One street tree every 25 feet*
- *No curb cuts where residential alleys provide access to rear garages.*



FIGURE 7

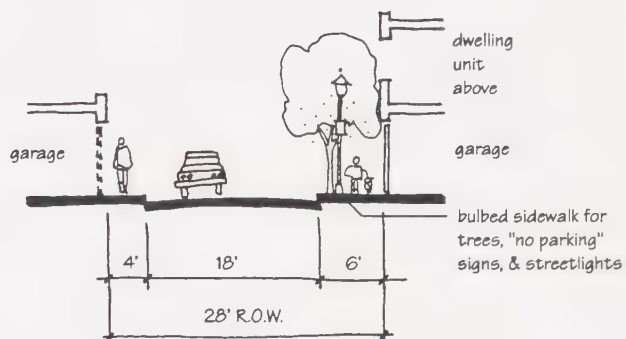


### Residential Alleys

Minimum width allows maximum lot area for open space or dwelling units. Sufficient width is provided for the passage of emergency vehicles. Narrowness and staggered bulbs induce slower traffic speeds, allow alleys to double as informal recreational space. Curb cut widths range between 10-12 feet, and allow sidewalk space for streetlights, signs or trees.

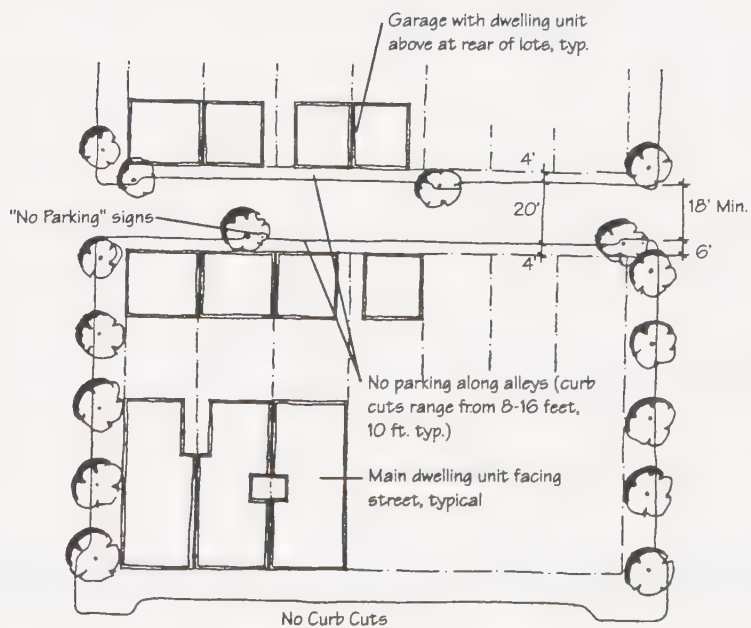
- ***Total right-of-way width of 28 feet.***
- ***Two travel lanes, each between 9 and 10 feet in width.***
- ***Two-foot corner sidewalk bulbs (at least one at each corner) accommodating street signs, trees or lights, and staggered to allow a minimum 18-foot right-of-way at all times.***
- ***Two 4-foot sidewalks, entirely unobstructed to meet ADA standards.***
- ***Curb cuts throughout to provide access to rear garages.***
- ***No curbside parking permitted at any time along alleys.***

FIGURE 8



Residential Alley (typical)

FIGURE 9



Residential Alley Plan

---

Parking Requirements

- *HILL HOUSING area (Blocks 48-57) development shall have a base requirement of one off-street parking space provided per dwelling unit (including secondary units potentially built above rear lot-line garage structures).*
- Additional spaces permitted in accordance with Section 204.5 of the City Planning Code.
- The base requirement may be reduced in low-income multi-unit structures, to no less than one space for every four units, if it can be demonstrated that anticipated vehicle ownership for the project as a whole is less than one vehicle per unit.
- Curb cuts shall not exceed 12 feet in width.
- Off-street parking shall be provided in an enclosed structure, either within the main residential structure, or within detached garages located at the rear of the lots with access from an alley.

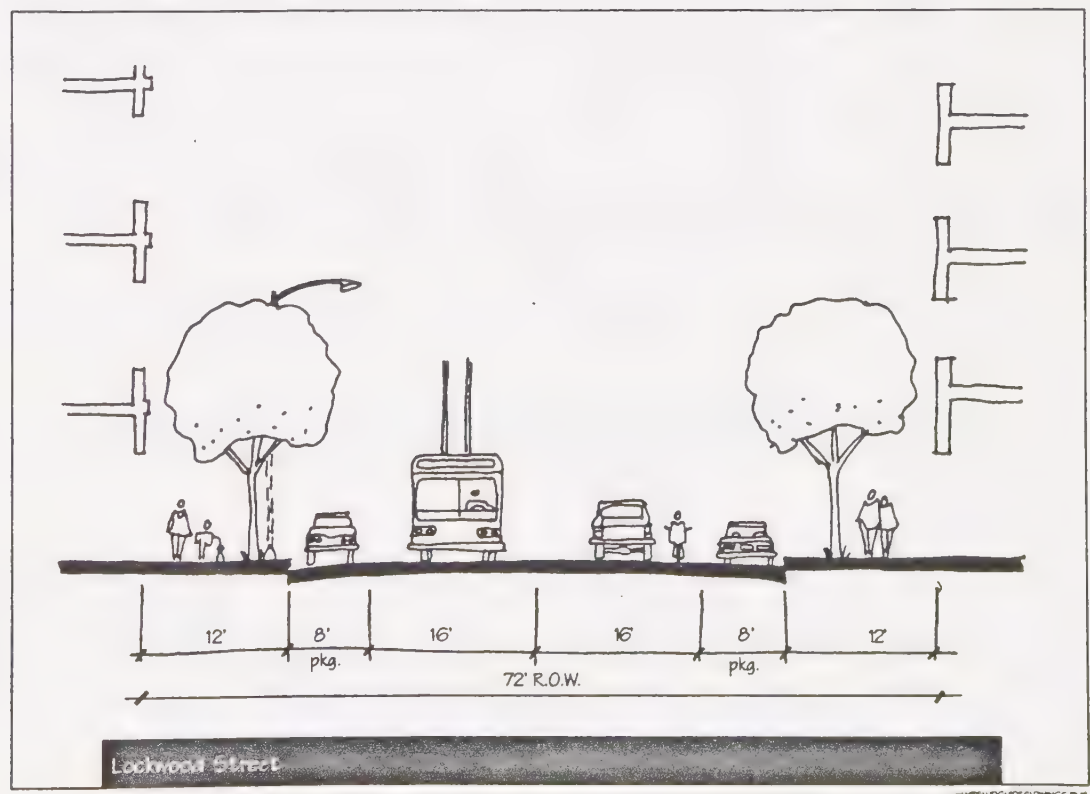


## Area Two: Lockwood Landing

Lockwood Street is the main commercial and transit street for the Shipyard and, with Spear Avenue, accommodates multiple transportation modes: cars and light trucks, buses, pedestrians and bicyclists. Wider sidewalks are designed for higher volume of pedestrian traffic. Bus and sidewalk bulbs facilitate transit loading and pedestrian street crossing. Trees and landscaping soften the visual impact of traffic and enhance the pedestrian experience. At least one transit transfer point where two or more transit lines intersect should be adjacent to a central plaza with transit information, maps and street furniture providing visitors with essential information and services, and convenient bicycle access with adequate bicycle parking facilities.

### Lockwood Street

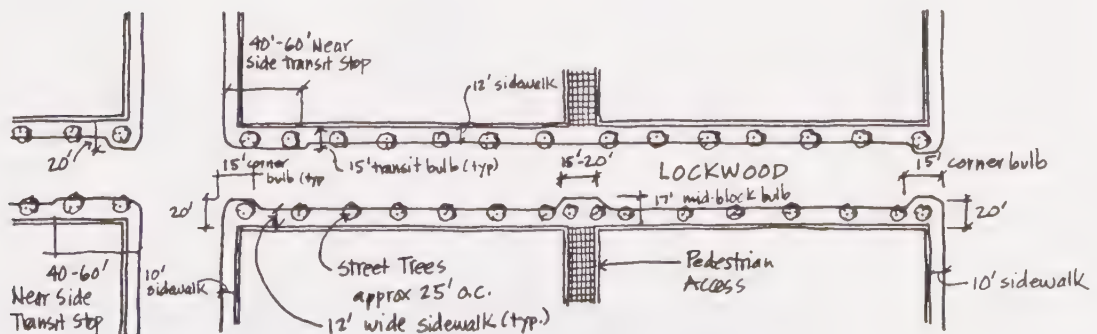
FIGURE 10



• Total Right of Way width (property line to property line) of 72 feet.

- Provide one moving lane each direction, 16 feet wide to provide maneuvering space as necessary; vehicles, bus transit and bicycles all share use of the lane.
- Provide one 8-foot wide parking lane each side of street, for primary use as short-term parking needs and secondary use for curbside loading functions.
- Provide base sidewalk width of 12 feet, widened at locations specified below.
- Provide street trees every 25 feet.
- Provide near-side bus stops every 800 - 1000 feet, with sidewalk bulbs 3 feet beyond normal curbline (15 feet wide total sidewalk), 40 feet in length behind crosswalk bar (or 60 feet if articulated coach vehicles are utilized).
- Provide sidewalk bulbing to the edge of the parking lane (20 feet total sidewalk width) at all other intersection locations to minimize pedestrian crossing distance and to provide for installation of pedestrian amenities; crosswalk bulbs should extend a minimum of 5 feet beyond the property line.
- Provide mid-block sidewalk bulbing of 5 feet extra width and 15-20 feet in length for installation of sidewalk amenities. Midblock bulbs on alternate sides of street block-by-block with midblock pedestrian crossing.
- Curb cuts and vehicle access from Lockwood Street prohibited; access to collective parking and loading areas is from side and rear streets .

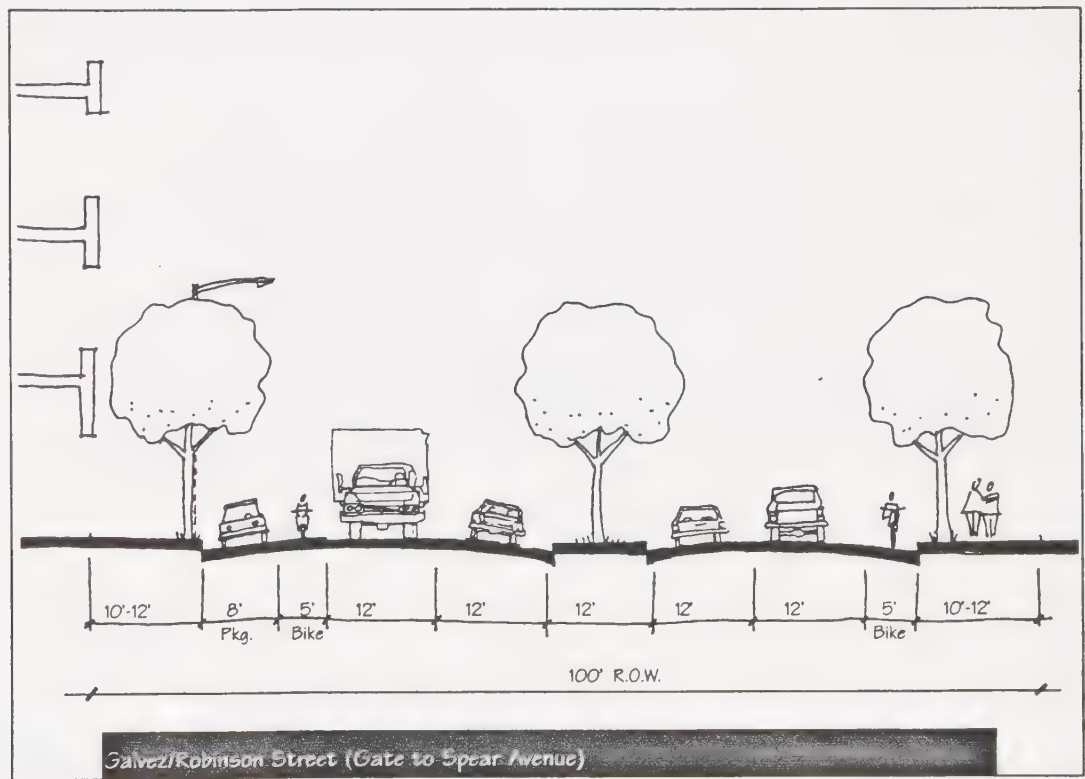
FIGURE 11



Galvez and Robinson Street, Gate to Spear Avenue

Galvez and Robinson Streets are old street names on the Shipyard. The transportation system plan calls for realigning and merging these two rights-of-way into a single new major arterial, the primary gateway into the Shipyard, that is alternately referred to as Robinson/Galvez, Robinson or Galvez Street in this document.

FIGURE 12

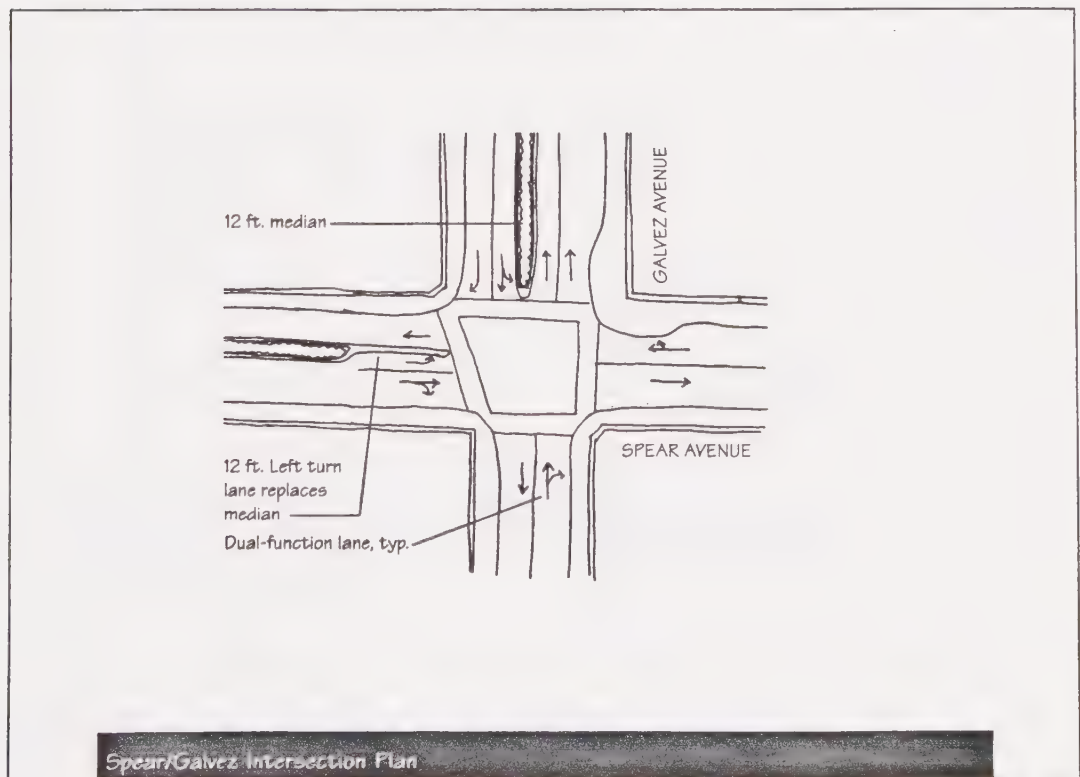


- *Provide a total Right of Way width (property line to property line) of 100 feet.*
- *Provide two continuous moving lanes each direction, 12 feet in width.*
- *Provide 12 foot wide landscaped median (converts to provide a left turn lane at appropriate intersections).*
- *Provide parking lane on one side only (side of street may vary depending on type and intensity of both adjacent uses and level of pedestrian activity).*
- *Provide five foot wide Class II striped bicycle lane each side of street.*



- *Provide sidewalks of between 10 - 12 feet (generally 12 feet in width adjacent to developed property, 10 feet in width adjacent to open space, but may vary depending on type and intensity of both adjacent uses and level of pedestrian activity), with bulbing at intersections and bus stops similar to those for Lockwood Street.*

FIGURE 13



*Spear Avenue, Robinson to east terminus*

- *Provide a total right of way width of 72 feet.*
- *Apply the same design standards as for Lockwood Street.*
- *Curb cuts and vehicular access to property from Spear Avenue would be prohibited; access is assumed from side and rear streets to collective parking and loading areas.*

FIGURE 14

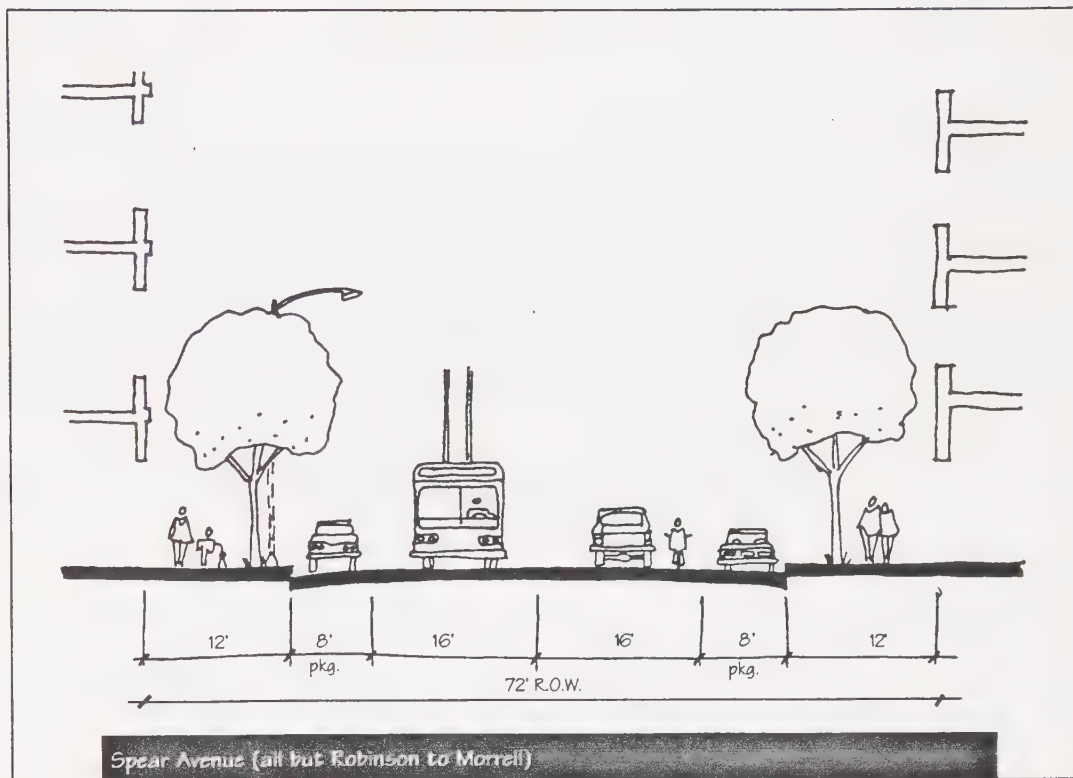
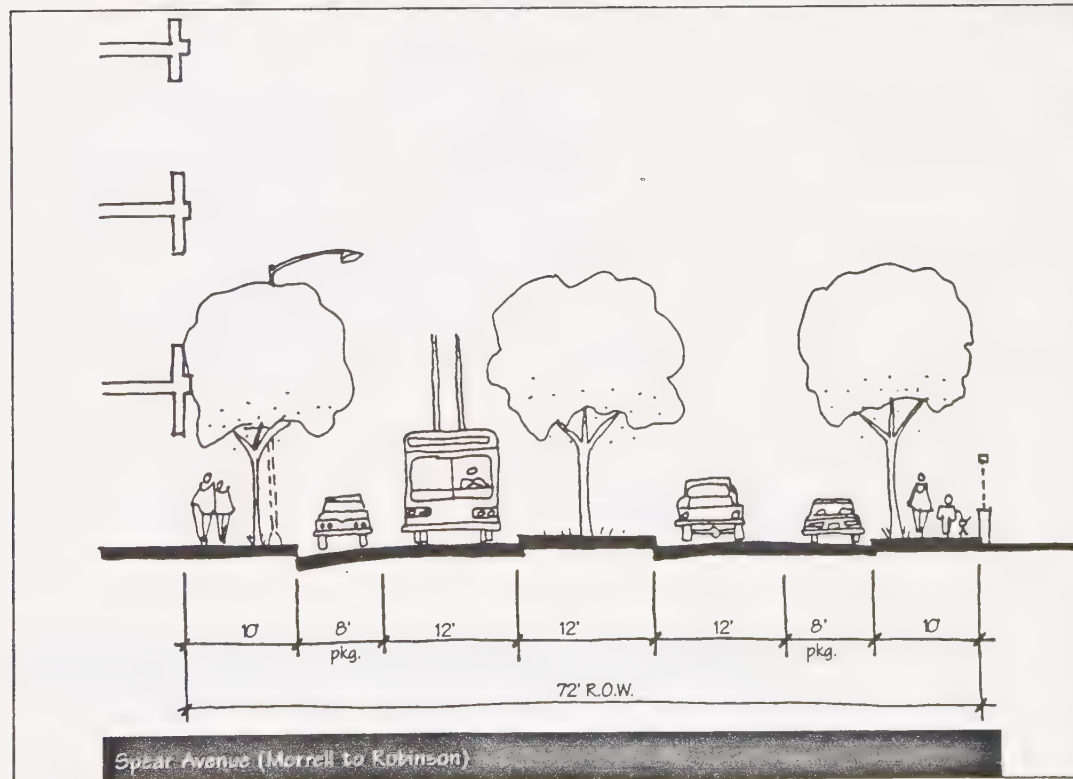


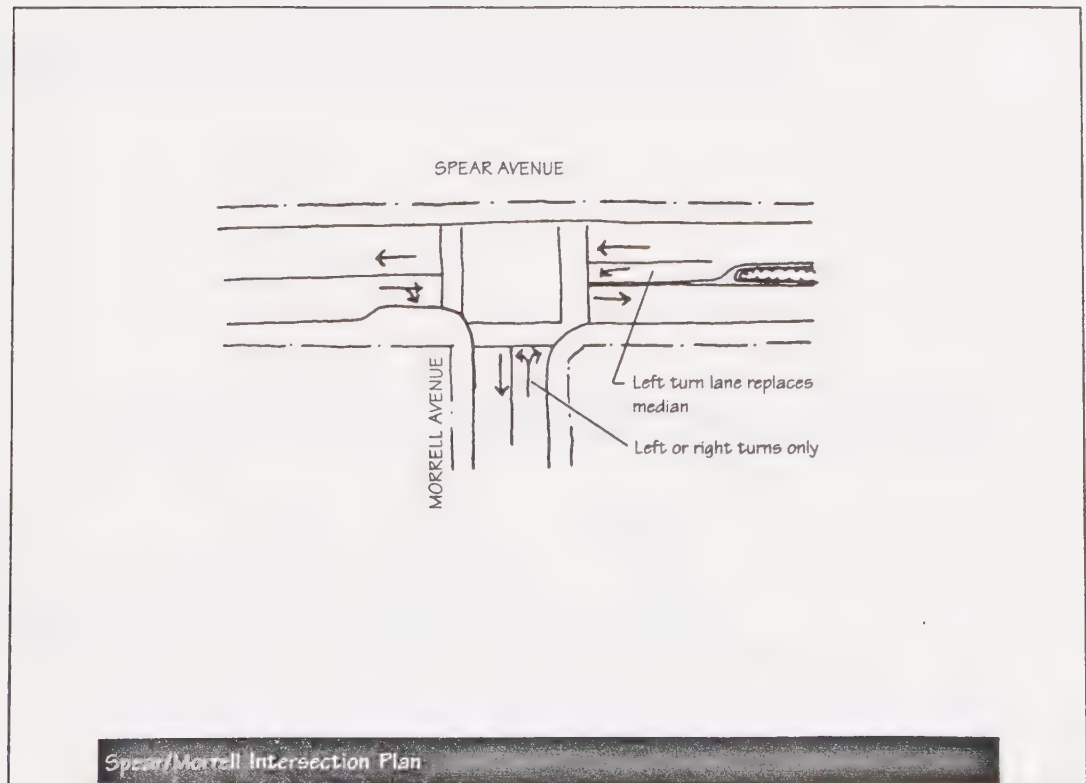
FIGURE 15



Spear Avenue, Morrell Street to Robinson

- *Provide a total right of way width of 72 feet.*
- *One continuous moving lane each direction, 12 feet in width.*
- *Parking lanes on both sides 8 feet in width.*
- *A 12 foot wide landscaped median which converts to an exclusive left turn lane at Galvez/Robinson Street and at Morrell Street.*
- *10 foot wide sidewalks each side of the street; no bulbing at any location.*
- *Curb cuts and vehicular access to property from Spear Avenue would be prohibited; access is assumed from side and rear streets to collective parking and loading areas*

FIGURE 16



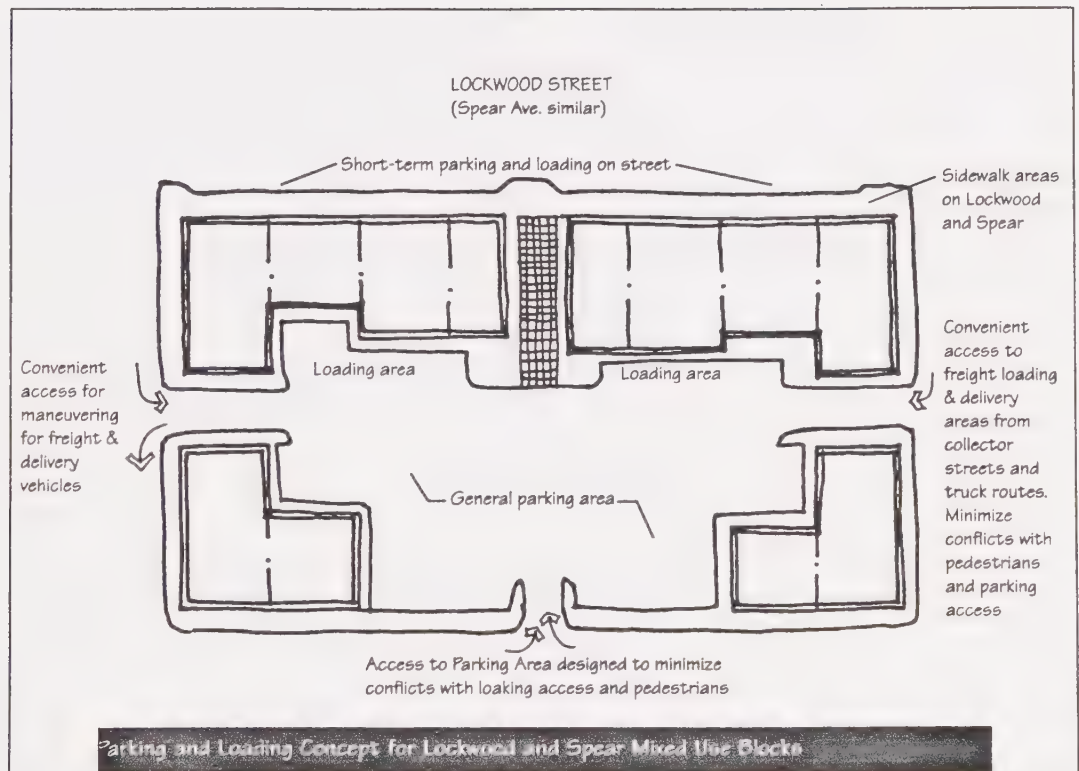


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### Parking Requirements

- *The total amount of off-Street parking to be provided in the Lockwood area is based on estimated long-term parking demand (based on the land uses permitted and including live/work unit residents) and shall be provided on a collective basis through a base requirement for each block. In general, the parking requirements shall be as follows:*
  - *Lockwood Mixed Use Area (Blocks 4-8, 10, 11, 13, 14) (see FIGURE 1):  
90 spaces per block.*
  - *Lockwood Cultural/Institutional Area (Blocks 17-22, 23-26) (see FIGURE 1):  
50 spaces per block*
- *Residents of live/work units shall be given first right of refusal for parking, at a ratio of one space per live/work unit*
- *Off-street parking requirements for individual blocks in the Lockwood Landing area may be reduced, provided that an equal number of off-street spaces is provided within the collective parking area on one or more adjacent blocks, allowing full development*
- *The configuration of the off-street parking spaces for the Lockwood Landing area shall prioritize parking for the disabled, rideshare participants and bicycles by locating these parking spaces closest to the buildings they serve.*
- *All other long-term parking spaces shall be “pooled” together on-site -- consolidated and shared between different property owners and land uses to make more efficient use of land.*
- *Automobile access to these interior parking areas should be designed to minimize conflict with circulation on sidewalks where pedestrian activity is high.*
- *Design parking facilities to provide priority areas for bicycles and rideshare vehicles, located closest to building entrances and other key destinations.*

FIGURE 17



### Service and Freight Delivery Requirements

Off-street loading spaces shall be provided for each block, rather than for each use, in the following manner:

- ***The rear portion of buildings fronting Spear Avenue, Lockwood Street and Galvez-Robinson Streets shall be reserved for and immediately accessible to collective service and freight loading functions.***
- ***Driveways providing access to interior block loading area shall accommodate truck movement and be convenient to truck service route and collector streets.***
- Design loading access and operation to minimize conflicts with pedestrian movement.
- When parking and loading functions are both expected to occur within open interior block areas, vehicular access to these interior areas should be designed to minimize conflicts between the two functions.

- 
- *When required off-street parking for any block in the Lockwood Landing area is not provided on that block, access to the rear portions of buildings for service and delivery functions shall still be maintained and shall minimize pedestrian conflicts and provide convenient access to collector and truck routes as described above.*
  - *One 30-foot on-street loading space shall be provided for every 150 linear feet or fraction thereof of block frontage abutting Spear Avenue or Lockwood Street and shall be marked with a yellow curb.*
  - Along streets designated as the truck route, proliferation of curb cuts and garage doors should be discouraged to minimize conflicts with circulation of through vehicles.

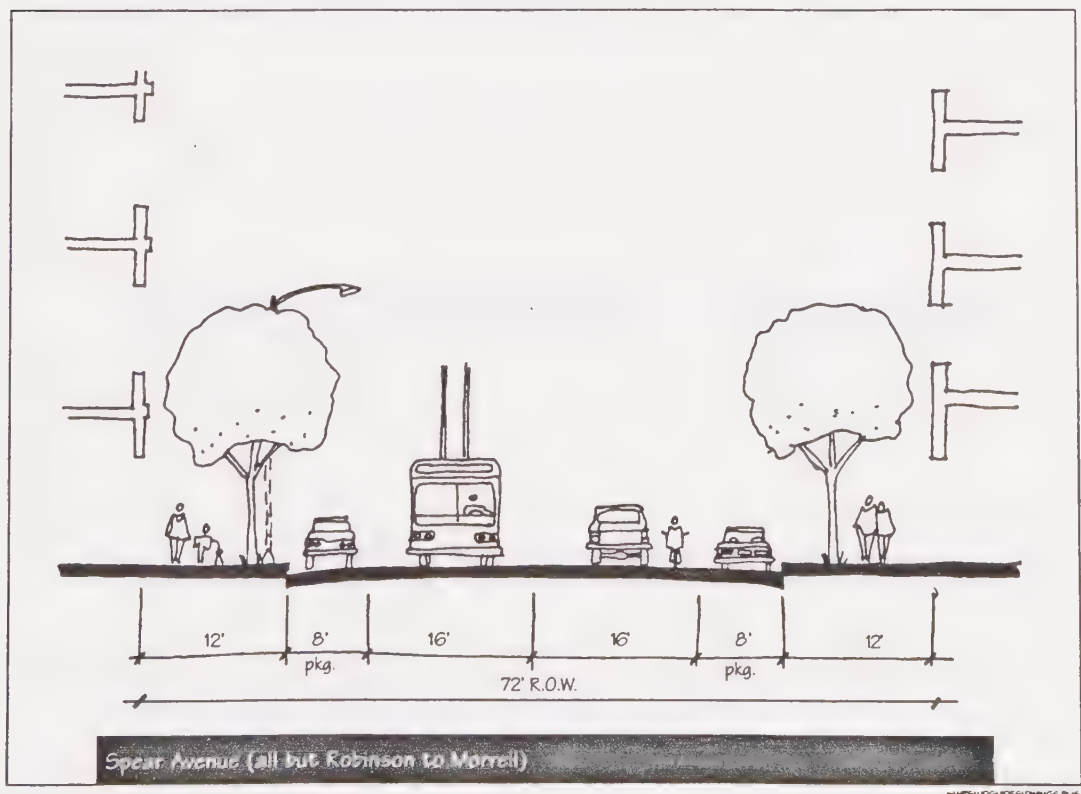


### Area Three: Light Industrial & Research and Development

It is critical that vehicle access in this area must be convenient. Pedestrian movement along the streets and alleys must also be safe and convenient, especially along Spear and Crisp Avenues, where most of employment and visitor trips made on transit will originate. Higher levels of large-vehicle traffic are anticipated, so the design of adjacent buildings should incorporate sound insulation, ventilation systems and other structural features that minimize the effects of traffic noise, pollution and vibration.

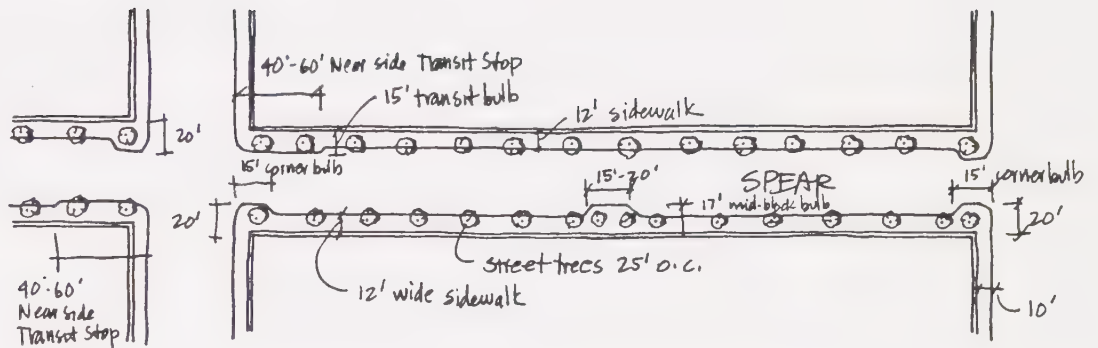
Spear Avenue: western terminus to Morrell Street

FIGURE 18



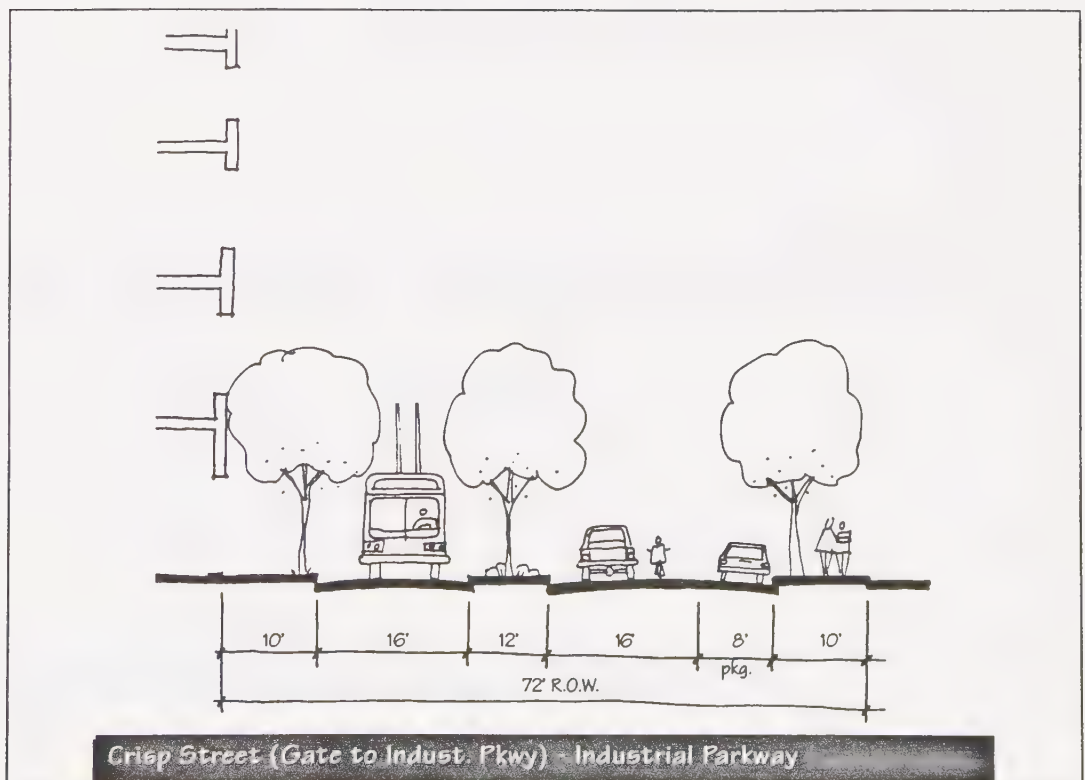
- *Provide a total Right of Way width (property line to property line) of 72 feet.*
- *Design guidelines are the same as for Lockwood Street.*
- In the block abutting Central Park, sidewalks should be extended in width into the parking lanes on both sides of the street (no curbside parking)

FIGURE 19



Crisp Street, and Industrial Parkway from Crisp Street to Spear Avenue

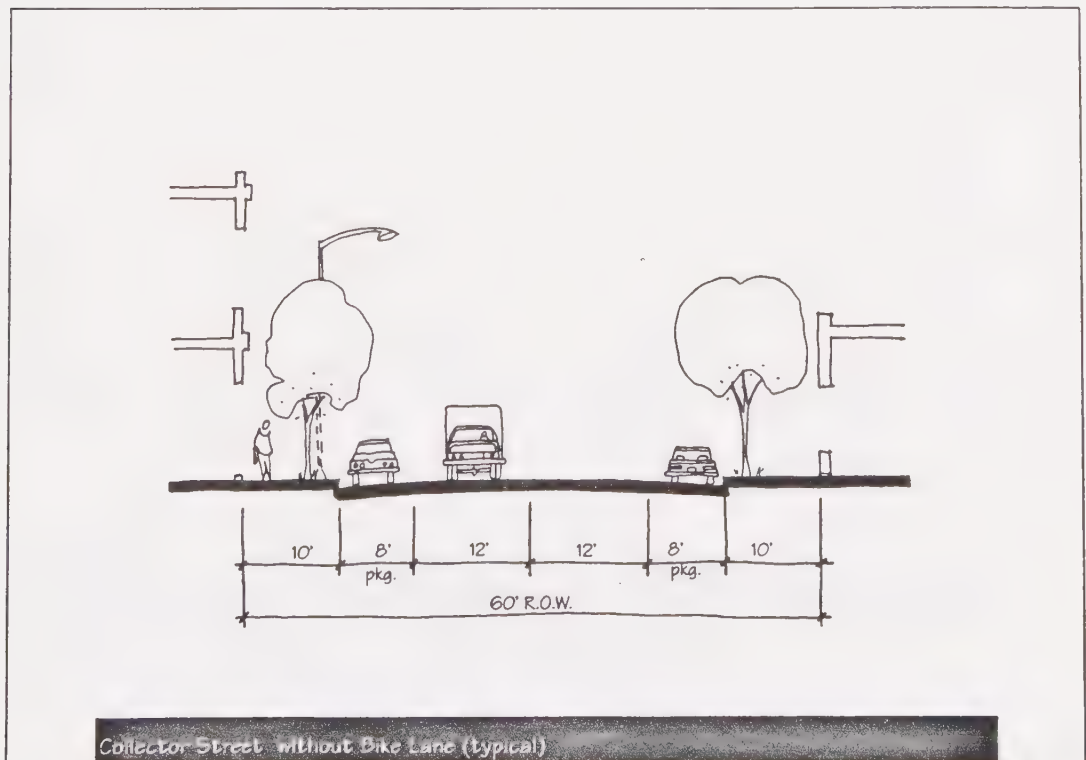
FIGURE 20



- *Provide a total Right of Way width (property line to property line) of 72 feet.*
- *Crisp Street, from the gate to Industrial Parkway, and continuing along Industrial Parkway to Spear Avenue, provide one travel lane in each direction 16 feet in width, sidewalks both sides 10 feet in width, parking on one side only (adjacent to waterside open space on Crisp to Industrial Parkway, or adjacent to developed uses on the continuation of Crisp from Industrial Parkway to Spear and on Industrial Parkway), and a center landscaped median 12 feet wide.*
- Along Crisp Street from Industrial Parkway to Spear Avenue the center median could be replaced with wider sidewalks and 8 foot parking lanes on both sides of the street (same design character as for Lockwood).

Truck Route (Collector Street)

FIGURE 21



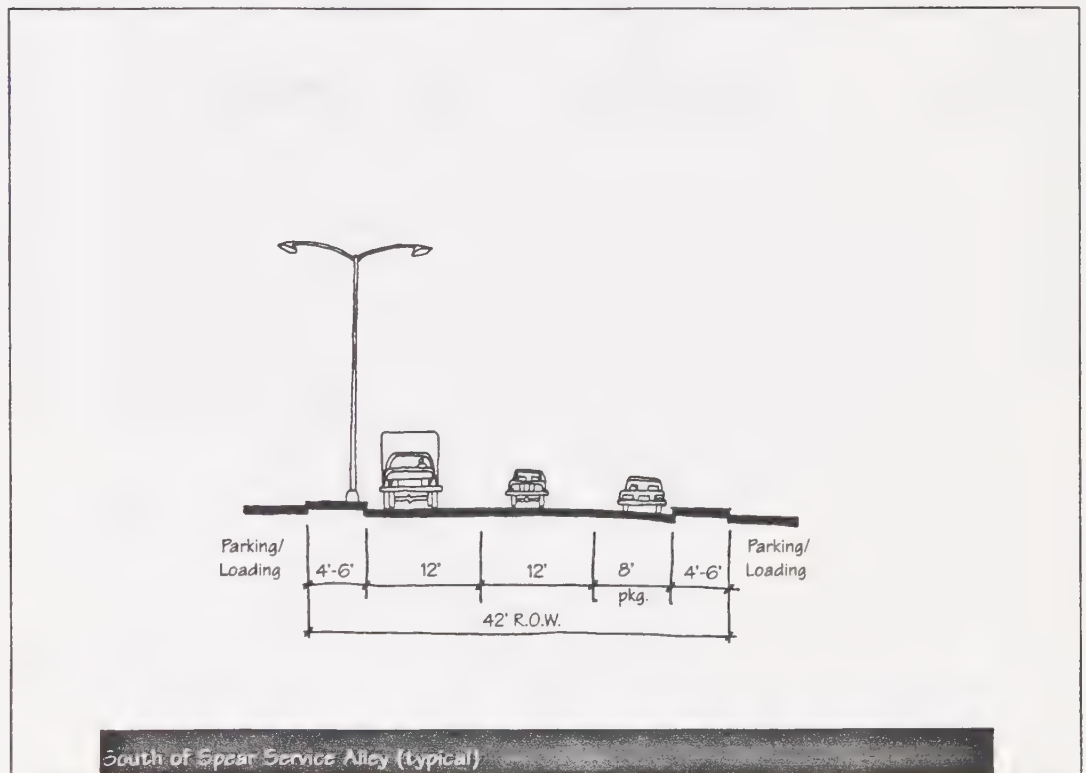
- *Total Right-of-Way width of 60 feet.*
- *Two travel lanes of 12 feet each.*
- *Two 10-foot sidewalks*



- *Two 8-foot curb (parking) lanes*
- *Street trees planted approximately every 25 feet, exceptions for curb cuts.*

*South of Spear Alleys*

FIGURE 22



- *Total right-of-way width of 42 feet.*
- *Two travel lanes, each and 12 feet in width.*
- *One 8-foot wide curbside parking lane.*
- *Two 4-foot sidewalks, entirely unobstructed to meet ADA standards and widened to 6-foot sidewalk bulbs to accommodate required street signs and lights, and staggered to allow a minimum 22-foot total travel lane width at all times.*
- *Curb cuts throughout to provide access to rear parking areas and loading.*

---

### Parking Requirements

- *The total amount of off-Street parking to be provided in the Spear Avenue Mixed Use/Cultural/Research & Development area (blocks 45-47, and the portions of blocks 29-33 north of the mid-block alleyway - see FIGURE 1) is based on estimated long-term parking demand (based on the land uses permitted and including live/work unit residents) and shall be provided on a collective basis through a base requirement for each block. In general, the parking requirement shall be 50 spaces per block.*
- *Residents of live/work units shall be given first right of refusal for parking, at a ratio of one space per live/work unit.*
- *Off-street parking requirements for individual blocks in the Mixed Use/Cultural/R&D area abutting Spear Avenue may be reduced, provided that an equal number of off-street spaces is provided within the collective parking area on one or more adjacent blocks, allowing full development.*
- *The configuration of the off-street parking spaces in each block in the Spear Avenue Mixed Use/Cultural/R&D area shall prioritize parking for the disabled, rideshare participants and bicycles by locating these parking spaces closest to the buildings they serve.*
- *All other long-term parking spaces shall be “pooled” together on-site -- consolidated and shared between different property owners and land uses to make more efficient use of land.*
- *Automobile access to these interior parking areas should be designed to minimize conflict with circulation on sidewalks where pedestrian activity is high.*
- *Design parking facilities to provide priority areas for bicycles and rideshare vehicles, located closest to building entrances and other key destinations.*
- *The Industrial areas south of Spear Avenue shall be subject to the off-street parking requirements based on the use of land as provided in the San Francisco City Planning Code, Sec. 151, as follows, except that these ratios shall be maximum as well as minimum (no 150% of minimum Code requirement allowance):*
  - *Industrial/manufacturing: one space for each 1,500 sq. ft. of occupied floor area where the occupied floor area exceeds 7,500 sq. ft.*
  - *Storage/warehouse space: one space for each 2,000 sq. ft. of occupied floor area where the occupied floor area exceeds 10,000 sq. ft.*

---

### Service and Freight Delivery Requirements

- *Off-street loading spaces in the Spear Avenue Mixed Use/Cultural/Research & Development Area (blocks 45-47, and the portions of blocks 29-33 north of the midblock alleyway - see FIGURE 1) shall be provided for each block, rather than for each use, in the following manner:*
- *The rear portion of buildings fronting Spear Avenue in the Spear Avenue Mixed Use/Cultural/Research & Development Area shall be reserved for and immediately accessible to collective service and freight loading functions.*
- *Driveways providing access to interior block loading areas shall accommodate truck movement and be convenient to truck service route and collector streets.*
- *Design loading access and operation to minimize conflicts with pedestrian movement.*
- *When parking and loading functions are both expected to occur within open interior block areas, vehicular access to these interior areas should be designed to minimize conflicts between the two functions.*
- *When required off-street parking for any block in the Spear Avenue Mixed- Use/Cultural/R&D area is not provided on that block, access to the rear portions of buildings for service and delivery functions shall still be maintained and shall minimize pedestrian conflicts and provide convenient access to collector and truck routes as described above.*
- *One 30-foot on-street loading space shall be provided for every 150 linear feet or fraction thereof of block frontage abutting Spear Avenue and shall be marked with a yellow curb.*
- *Along streets designated as the truck route, proliferation of curb cuts and garage doors should be discouraged to minimize conflicts with circulation of through vehicles.*
- *The Industrial areas south of Spear Avenue shall be subject to the off-street loading requirements as provided in the San Francisco Planning Code, Sec. 152:*

#### Use

*Industrial/wholesale/manufacturing*

#### Requirement

*none for 0-10,000 sq. ft.  
1 space for 10,001 - 60,000 sq. ft.  
2 for 60,001 - 100,000 sq. ft.  
3 for over 100,000 sq. ft. plus 1 for  
each additional 80,000 sq. ft.*



#### IV. TRANSPORTATION DEMAND MANAGEMENT

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Not all design aspects of the overall transportation program for the Shipyard are physical in nature. In order to assure that the physical transportation system functions well, without undue impacts to adjacent neighborhoods and communities, Transportation Demand Management (TDM) programs need to be designed and implemented.

Transportation Demand Management includes a wide spectrum of programs and specific measures designed to reduce travel by low-occupancy private vehicles, in favor of various forms of public and private transit, ridesharing, and non-motorized modes. Often, TDM programs focus primarily on travel during peak commute periods when congestion is at its worst, and sometimes include measures to induce a shift in travel times to periods when levels of congestion are lower. However, there are opportunities to extend TDM programs to off-peak, non-commute travel as well. Because of the limited vehicular access to and from the Shipyard, TDM strategies and programs will be a necessary component of the overall transportation systems designed. Without TDM policies and programs, the transportation system external to and within Hunters Point Shipyard would need to be designed much differently, with higher infrastructure needs and investments.

The TDM Program for the Hunters Point Shipyard is designed to highlight a cooperative process in which the private sector is encouraged to implement, on a voluntary basis, programs specific to their needs, while the owners/managers of the entire property (the San Francisco Redevelopment Agency) provide guidance, and provide services on an areawide basis. A three tiered approach is contemplated, which will facilitate implementation of a reasonable and viable TDM program.

##### **Tier One**

The first tier focuses on measures and actions which should and can be taken by the overall property owners and managers of the Shipyard, the San Francisco Redevelopment Agency. Some of these are related to mitigation measures as may be identified in the EIS/EIR for redevelopment of the Shipyard. Others directly relate to establishing a context for working with potential developers to actively promote, encourage and facilitate TDM considerations as an integral part of physical development within the Shipyard.

---

Responsibilities of San Francisco Redevelopment Agency as Property Owner/  
Manager

- *Develop, as part of the overall development phasing scheme for HPSY, a specific transportation performance standard, such that transportation conditions both within and outside the Hunters Point Shipyard property are monitored on a regular basis to assure they stay within acceptable performance standards (e.g. intersection and/or arterial segment Level of Service), with provisions to deny permits for development if conditions, as measured or as projected as a result of a particular development proposal, deteriorate below specified standards; development may resume only when conditions are demonstrated to return to acceptable levels.*
- *Insure that a mix of land uses are developed in HPSY, convenient to all residents, employees and visitors, that would reduce the need for using autos, e.g. child care services, banks and other personal services, restaurants, etc.*
- *Establish development guidelines and standards for parking which provide incentives for ridesharing, and assure that these standards are regularly and equitably applied.*
- *Establish a Transportation Management Association (TMA) for HPSY, which would ultimately be a private sector entity, to systematically and progressively implement specific TDM programs and actions appropriate for the entire HPSY community.*
- *Include promotion of TDM in all leasing materials prepared for HPSY, including a listing of services provided for the entire property through the TMA, and encouragement for individual lessees to voluntarily implement programs*
- *Include in any negotiated Development Agreements or other negotiated development permits, requirements for developers to participate in programs conducted by the HPSY TMA and, possibly, for developers to implement site-specific TDM programs (such "negotiated" agreements appear to be considered voluntary or at the discretion of the developer to agree to accept, and therefore outside the purview of SB 437; this action would be applicable primarily to large developments such as cultural/ institutional uses)*

- 
- *Program an appropriate portion of tax increment revenues for ongoing support of TDM programs and measures (financing of TDM shared among SFRA, private sector and possibly San Francisco Transportation Sales Tax funds)*

## **Tier Two**

The second tier is perhaps the most important in terms of implementation of specific TDM programs and measures. It is likely that the Shipyard will have many small businesses, which often do not have the means or "critical mass" of employees necessary for effective TDM programming and implementation. It would be most appropriate to establish an umbrella Transportation Management Association for the Shipyard, which has responsibility for developing and implementing programs directed at the entire property, in which individual businesses can participate. These are measures which can have an impact at a broad level, in terms of the types of transportation services made available to users of the entire Shipyard community.

### Responsibilities of a Hunters Point Shipyard Transportation Management Association

- *Monitor compliance with transportation performance standards established for the transportation network external to and within the Shipyard*
- *Establish baseline data regarding transportation travel modes, purposes, origins/destinations and times, at an appropriate level of development and occupancy, and periodically monitor and update this data*
- *Develop and implement TDM programs and actions appropriate for the entire HPSY community, including but not limited to:*
  - *Coordination with transit operators for route extensions into HPSY, locations of transit stops, frequency of service, etc.;*
  - *Ridesharing promotion and implementation;*
  - *As needed, provision of shuttle transit services within HPSY, and between HPSY and major regional transit terminals, initially perhaps focusing on peak commute periods and/or for major special events but eventually expanding to off-peak times if needed;*



- 
- *Coordination with the greater South Bayshore community, appropriate City and County agencies, and other transportation agencies (e. g., RIDES for Bay Area Commuters and other TMS's in the City and region) to identify and deal with transportation problems and issues, and work with these entities to provide appropriate solutions.*
  - *Development of incentives for participation in TDM programs by businesses and individuals, such as a "Guaranteed Ride Home" program for rideshare participants*
  - *As needed and upon request, provide assistance to individual businesses and institutions within HPSY for development and implementation of voluntary, site-specific TDM programs*
  - *Develop and actively promote a "menu" of TDM programs, measures and actions which could be voluntarily implemented by individual businesses and institutions locating within HPSY (see attachment for listing of potential actions)*
  - *Develop and periodically update an emergency transportation access strategy and program for the site as a whole, which individual businesses could utilize*

### **Tier Three**

The third tier centers on individual businesses locating at the Shipyard, and developers that wish to build at the Shipyard, and the types of TDM programs appropriate for consideration at this level. These are largely actions and measures which relate directly to travel choices made by individual employees or business visitors, and are thus best addressed at the employer-employee relationship level, or the business-client relationship level.

#### *Responsibilities of Developers Building in Hunters Point Shipyard, and of Individual Businesses and Institutions Locating in the Shipyard*

- *Implement any and all specific measures which may be imposed through negotiated agreements for project development*
- *Be a "Good Neighbor" and commit to voluntarily implementation of site-specific TDM programs, selected from the "menu" developed and promoted by the HPSY TMA.*



- 
- *Voluntary participation in the TMA established for HPSY*
  - *Cooperation with other businesses and institutions in HPSY in coordinating transportation services and parking needs*
  - *Adopt site-specific practices that encourage the use of alternatives modes (e.g. amenities, good access to transit)*

*Potential Items to be Included in a Menu of Transportation Demand Management Strategies Which Could be Implemented on a Voluntary Basis by Hunters Point Shipyard Businesses*

- Rideshare (carpool and vanpool) promotion
- Active facilitation of formation of rideshare arrangements
- Company-sponsored vanpools
- Employee subsidy for ridesharing
- Parking “cash out” program
- Dissemination of transit information
- On-site sales of pre-paid transit passes and tickets
- Employee transit subsidy
- Discounted admission or purchase with proof-of-payment transit receipt
- Employee transportation allowance
- Provision of shuttle services between work site and major transit terminals
- Flex-time work schedules
- Alternative work schedules (e.g. 4/10 )
- Telecommute policies (including possible remote work sites)
- Job sharing policies and programs
- Preferential parking assignment/rates for carpools and vanpools
- Guaranteed ride home program
- Provision of informational materials to employees (and clients/patrons) regarding transportation alternatives
- Inclusion of transit access information in business advertisements and on flyers promoting special events
- Provision of a Transportation Coordinator (direct or referral) to provide assistance in exploring/using transportation alternatives
- Parking rates which discourage all-day parking
- Offering incentives (financial or otherwise) to encourage employees to try and use transportation alternatives, such as tax-deductible Commuter Check

- 
- Provide/make available to employees locker room/shower facilities (for bicyclists/joggers)
  - Provision of safe and convenient bicycle parking facilities
  - Development and dissemination of a transportation demand strategy that provides guidelines in the event of an emergency

## CREDITS

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